

FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-5372

Inflation Systems, Inc.

INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-5372. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater Emerald Services. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A—Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D—Response to Comments.

GENERAL INFORMATION	
Applicant	Inflation Systems, Inc.
Facility Name and Address	Inflation Systems, Inc. 9138 Randolph Rd. N.E. Moses Lake, WA 98837
Type of Facility:	Manufactures and assembles azide based propellant units (air bag)
Facility Discharge Location	Latitude: 47° 12' 30" N Longitude: 119° 19' 06" W.
Treatment Plant Receiving Discharge	Emerald Services, located in Seattle, Washington
Contact at Facility	Name: F. Skip Allred, (509) 762-3131 ext. 3251; Fax # (509) 762-3137
Responsible Official	Name: Thom Walsh Title: Plant Manager, (509) 762-3131; Fax # (509) 762-3137

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BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Inflation Systems, Inc. (ISI) manufactures and assembles airbags units for motor vehicles at the Port of Moses Lake (see Appendix C - Figure 1). They manufacture non-azide based propellant units (3110, 2004 and 128) as well as azide based propellant units (855 and 311). Azide propellants are no longer manufactured by ISI. Equipment within the production and assembly units are housed in independent chambers within each manufacturing building and are equipped with scrubbers that provide particulate removal.

3110 Propellant Process: The 3110 propellant process begins at dryers where strontium nitrate and Volclay HPM-20 (bentonite clay) are ground and dried. The next step screens 5-aminotetrazole potassium salt and 5-amino-1H-tetrazole in Sweco Screens. The above raw materials are then combined and processed in the mills to produce propellant powder. The powder is then pressed in a slugger, granulated, and pressed into tablets. The tablets are then processed through a V-blender for de-dusting and packaging.

2004 Propellant Process: The 2004 propellant manufacturing process mixes ammonium nitrate, potassium nitrate, and strontium nitrate. The batch mix is then combined with bentonite clay and 5,5-bi-1h-tetrazole diammonium salt to form a rough powder raw material mix. The raw mix is granulated and sent to one of the three presses which generates tablets for use in inflator enhancer cups, wafers for use in passenger-side inflators, or wafer for use in driver-side inflators.

128 Propellant Process: The 128 propellant manufacturing process begins at two mills that grind potassium chlorate and 5-aminotetrazole potassium salt, ovens that dry 2,4 dinitrophenylhydrazine and 5-aminotetrazole potassium salt, and a dissolver that dissolves Kratons. These raw products are then blended with xylene in a mixer. The product is then sent to an extruder and marumerizer which generates a cylindrical formed product. The product is then sent on to a fill and sealer that encloses the 128 Propellant into caps for use at assembly. The 128 propellant Process does not generate any wastewater because it does not include any scrubbers.

Air Pollution Controls: ISI utilizes rotary atomizing and Rotoclone scrubbers to control the particulate emissions associated with the 3110 and 2004 propellant manufacturing and assembly processes (multiple scrubbers). The 3110 and 2004 manufacturing and assembly process wastewater is captured in vaults and on-site wastewater storage tanks for transfer to tanker trucks for transport to off-site disposal facilities.

ISI is not a Significant Industrial User nor is subject to Categorical Pretreatment Standards.

HISTORY

The facility continues to operate as it has in the past, 24 hours a day, five days a week, 51 weeks a year. The facility began operation in 1992 producing sodium azide based solid propellants and solid propellant actuated devices (air bags). From this operation, a process wastewater was generated. This wastestream was treated and discharged to the City of Moses Lake, Larson Treatment plant. In 1998, the facility stopped using azide based propellants, and ceased

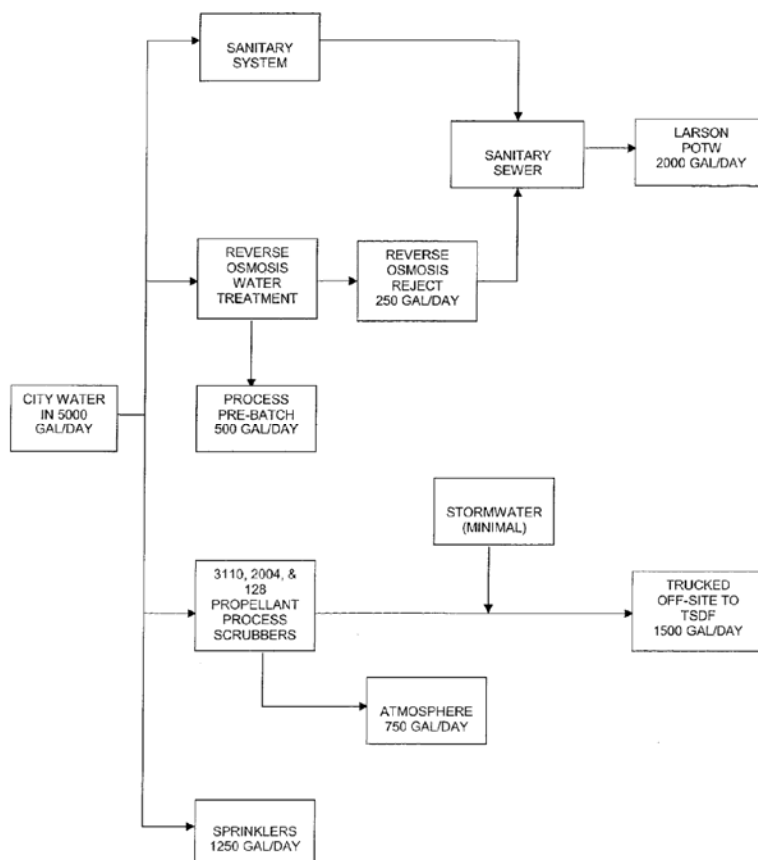
discharging process wastewater to the Larson treatment plant. In 1999, the Permittee began using a parts washer to clean metal bodied parts. The wastewater from the parts washer was discharged to the Larson Treatment Plant. The Permittee has stopped using the parts washer and the only discharge is presently sanitary wastewater from the site. There are no current plans to modify current production procedures or add new production procedures.

INDUSTRIAL PROCESSES

The facility uses the chemicals mentioned in the previous section, (Description of the Facility) to produce three different types of propellant products; 3110, 2004, and 128. These three processes for these products produce separate wastestreams that equal a maximum daily discharge flow of 5,000 gallons per day (gal/day), with a maximum average monthly discharge flow of 2,000 gal/day.

TREATMENT PROCESSES

All process wastewater/sludge is captured and stored on-site for pickup and disposal by Emerald Services, Inc of Seattle. According to the permit application submitted by the permittee, Emerald Services is a licensed Treatment Storage and Disposal Facility. A schematic diagram of the treatment process is included below.



PERMIT STATUS

The previous permit was issued on July 14, 1999 and expires July 14, 2006. An application for a permit was submitted to the Department on January 17, 2006 and accepted by the Department on May 10, 2006.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on November 9, 1999. During the history of the previous permit, the Permittee has remained in compliance based on Discharge Monitoring Reports (DMRs) and other reports submitted to the Department and inspections conducted by the Department.

WASTEWATER CHARACTERIZATION

ISI has not been required to monitor their process wastewater; therefore there is no wastewater characterization.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

Since all process wastewater/sludge is captured and stored on-site for pickup and disposal by Emerald Services, Inc, neither AKART nor local limits apply to the permittee.

The only limits that will be proposed in this fact sheet and permit will be for flow. ISI will be limited to a maximum daily discharge of 5,000 gal/day and a maximum average monthly discharge of 2,000 gallons/day.

MONITORING REQUIREMENTS

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. For the process wastewater trucked offsite for disposal, the proposed permit requires flow monitoring.

The previous permit required monitoring of combined process and sanitary wastewater discharged from the facility to the Larson treatment plant. Even though there is no longer any process wastewater discharged to the POTW, the proposed permit will continue to require monitoring of the sanitary wastewater. This monitoring will ensure that there is no process contaminated wastewater being discharged to the sanitary sewer system.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110 and 40 CFR 403.12 (e),(g), and (h)).

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S.5. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition

G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for five years.

REFERENCES FOR TEXT AND APPENDICES

Washington State Department of Ecology.

Laws and Regulations(<http://www.ecy.wa.gov/laws-rules/index.html>)

Permit and Wastewater Related Information
(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

APPENDICES

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on May 31 and June 7, 2006 in the Columbia Basin Herald to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

This permit was written by Pat Hallinan.

APPENDIX B—GLOSSARY

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference— A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through— A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

- a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;
- b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantification Level (QL)-- A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)--

- 1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;
- 2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C—SITE LOCATION

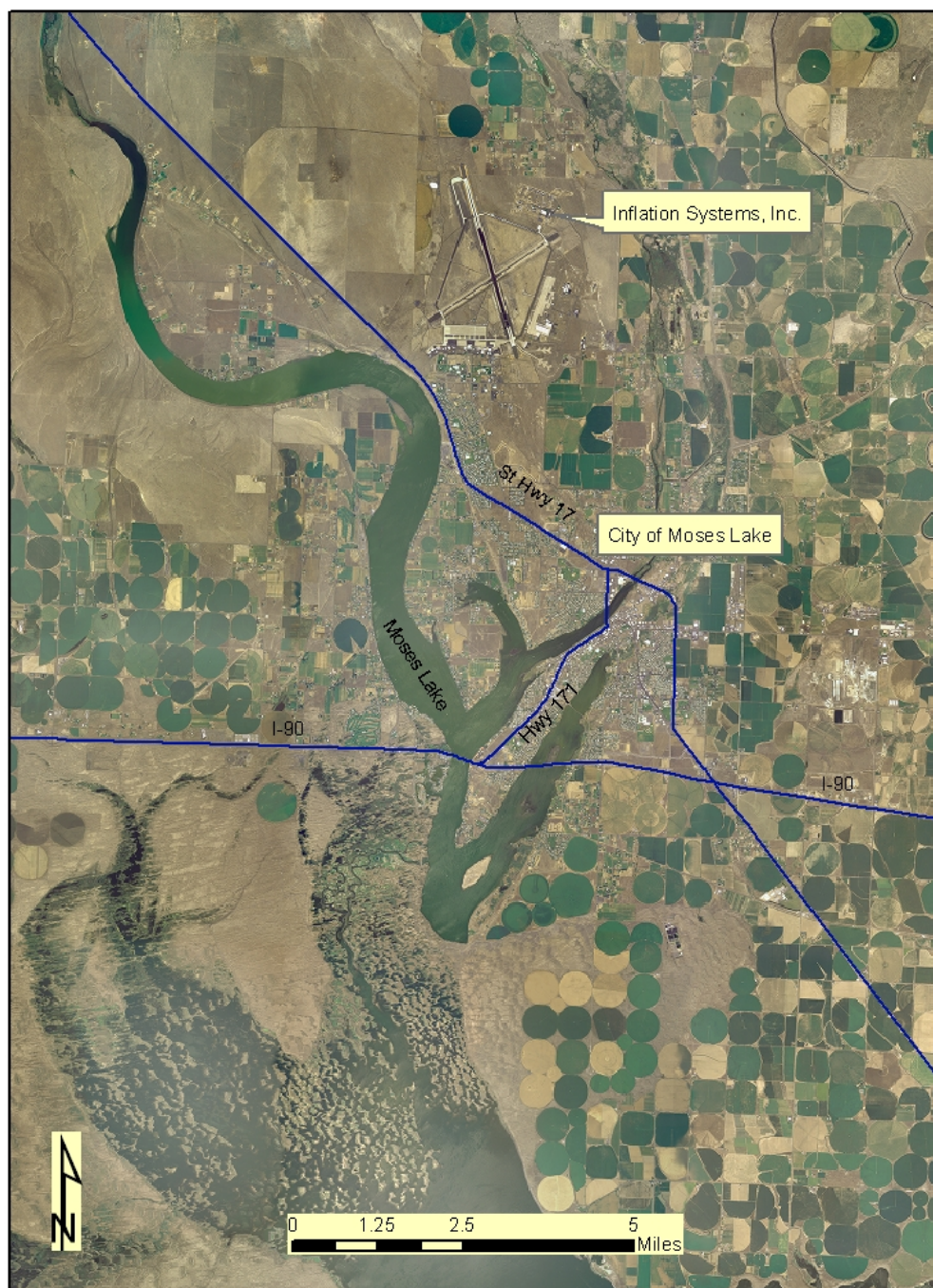


Figure 1. Inflation Systems, Inc.

APPENDIX D—RESPONSE TO COMMENTS

There were no comments received on the draft permit and fact sheet.